

DAE/JFW  
PTO/SB/21 (09-04)

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/341,407
	Filing Date	October 12, 1999
	First Named Inventor	Terry L. Delovitch
	Art Unit	1644
	Examiner Name	Ilia Ouspenski
Total Number of Pages in This Submission	Attorney Docket Number	087300-000400US

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Request for Certificate of Correction PTO/SB/44 (Certificate of Correction) Copy of Notice of Recordation Marked-Up Copy of Pg. 1 of U.S. Pat. No. 6,841,152 Return Postcard
Remarks		The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	Townsend and Townsend and Crew LLP		
Signature			
Printed name	Nathan S. Cassell		
Date	March 13, 2006	Reg. No.	42,396

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Signature			
Typed or printed name	Nina L. McNeill	Date	March 13, 2006



I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

**PATENT**

Attorney Docket No.: 087300-00400US

Certificate of Correction Branch  
Commissioner for Patents,  
P.O. Box 1450  
Alexandria, VA 22313-1450

on March 13, 2006

TOWNSEND and TOWNSEND and CREW LLP

By Nina L. McNeill  
Nina L. McNeill

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Delovitch, Terry L.

Patent No.: 6,841,152

Issued: January 11, 2005

For: Methods for Preventing Autoimmune Disease

Examiner: Ilia Ouspenski

Technology Center/Art Unit: 1644

REQUEST FOR CERTIFICATE OF  
CORRECTION UNDER §1.323

Certificate of Correction Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to MPEP 1481.01 and 37 CFR §1.323 Applicant submits a Certificate of Correction correcting minor errors inadvertently left uncorrected by Applicant.

The desired corrections are set forth on form PTO/SB/44, enclosed.

An error appears in the above-identified patent. The assignee listed at item number (73) on the cover sheet of the published patent should be changed as follows:

“The Wellesley Hosp. Foundation”

“Toronto (CA)”

should be removed, and replaced with

“John P. Robarts Research Institute”

“Ontario (CA)”

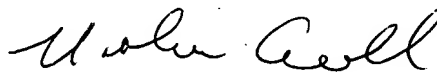
The assignment to John P. Robarts Research Institute was submitted for recordation as set forth in 37 CFR 3.11 before the issuance of the patent, as evidenced by the enclosed Notice of Recordation dated January 5, 2000.

03/16/2006 LWDNDIM1 00000085 201430 09341407  
01 FC:1464 130.00 DA

03/16/2006 LWDNDIM1 00000084 201430 6841152  
01 FC:1811 100.00 DA

Please deduct the fee, pursuant to 37 CFR §1.20(a), of \$100.00 from deposit account 20-1430 and any additional fees associated with this Certificate, including the fee pursuant to 37 CFR §1.17(i), of \$130.00. This Request is submitted in triplicate.

Respectfully submitted,



Nathan S. Cassell  
Reg. No. 42,396

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel. (415) 576-0200  
Fax (415) 576-0300  
Attachments:

1. *PTO/SB/44*
2. *Notice of Recordation of Assignment Document*
3. *Marked up cover sheet of US Patent No. 6,841,152*

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 6,841,152  
APPLICATION NO.: 09/341,407  
ISSUE DATE : January 11, 2005  
INVENTOR(S) : Delovitch, Terry L.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The assignee listed at item number (73) on the cover sheet of the published patent should be changed as follows:

"The Wellesley Hosp. Foundation"

"Toronto (CA)"

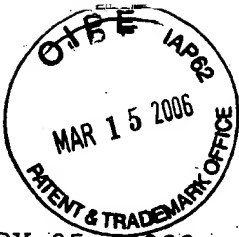
should be removed, and replaced with

**"John P. Roberts Research Institute"**

**"London (CA)"**

MAILING ADDRESS OF SENDER (Please do not use customer number below):

TOWNSEND AND TOWNSEND AND CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, CA 94111-3834



087300-000 40065  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
KBDow

JANUARY 05, 2000

PTAS  
TOWNSEND AND TOWNSEND AND CREW LLP  
KAREN B. DOW  
TWO EMBARCADERO CENTER, 8TH FLOOR  
SAN FRANCISCO, CA 94111-3834



\*101170951A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/12/1999

REEL/FRAME: 010296/0055  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

DELOVITCH, TERRY L.

DOC DATE: 09/10/1999

ASSIGNEE:

JOHN P. ROBARTS RESEARCH INSTITUTE  
100 PERTH DRIVE  
LONDON, ONTARIO, N6A 5K8, CANADA

SERIAL NUMBER: 09341407  
PATENT NUMBER:

FILING DATE: 10/12/1999  
ISSUE DATE:

MAYA BENNETT, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

RECEIVED  
JAN 10 AM 8:04

TOWNSEND & CREW



US006841152B1

**United States Patent**  
**Delovitch**(10) Patent No.: **US 6,841,152 B1**  
(45) Date of Patent: **Jan. 11, 2005****(54) METHODS FOR PROTECTING AGAINST  
AUTOIMMUNE DIABETES****(75) Inventor:** Terry L. Delovitch, London (CA)**(73) Assignee:** ~~The Wellesley Hosp. Foundation, Institute~~  
~~Toronto (CA)~~ *John P. Roberts Research*  
*London (CA)***(\*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.**(21) Appl. No.:** **09/341,407****(22) PCT Filed:** **Jan. 12, 1998****(86) PCT No.:** **PCT/CA98/00015**

§ 371 (c)(1),

(2), (4) Date: **Oct. 12, 1999****(87) PCT Pub. No.:** **WO98/30232**PCT Pub. Date: **Jul. 16, 1998****(30) Foreign Application Priority Data**

Jan. 10, 1997 (CA) ..... 2194814

**(51) Int. Cl.<sup>7</sup>** ..... **A61K 39/395****(52) U.S. Cl.** ..... **424/130.1; 424/133.1;**  
**424/141.1; 424/143.1; 424/144.1****(58) Field of Search** ..... **424/130.1, 133.1,**  
**424/141.1, 143.1, 144.1, 137.1, 152.1, 153.1,**  
**154.1; 530/387.1, 387.5, 388.1, 388.22,**  
**388.7, 388.75; 514/866, 885****(56) References Cited****FOREIGN PATENT DOCUMENTS**

EP	WO9005541 A	5/1990
EP	WO9200092	1/1992
EP	WO9319767 A	10/1993
EP	WO9428912	12/1994
EP	WO9503408 A	2/1995
EP	WO9505464 A	2/1995
EP	WO9614865	5/1996

**OTHER PUBLICATIONS**Liang et al., *J. Immunol.* 1999; 163:2322-2329.\*Bowman et al. *Immunology Today* 15(3):115-120 1994.\*Shehadeh et al., "Effect of Adjuvant Therapy on Development of Diabetes in Mouse and Man," *Lancet*, 334:706-707 (1994).Dahlquist et al., "The Cumulative Incidence of Childhood Diabetes Mellitus in Sweden Unaffected By BCG-Vaccination," *Diabetologia*, 38:873-874 (1995).Sperling et al., "CD34 is A Murine T Cell Costimulatory Receptor That Functions Independently Of CD28," *J. Exp. Med.*, 182:139-146 (1995).Grewal et al., "Requirement For CD40 Ligand In Costimulation Induction, T Cell Activation, and Experimental Allergic Encephalomyelitis," *Science*, 273:1864-1867 (1996).Wingren et al., "T Cell Activation Pathways: B7, LFA-3, and ICAM-1 Shape Unique T Cell Profiles," *Critical Reviews In Immunology*, 15(3&4):235-253 (1995).Ekerfelt et al., "Transfer of myelin-specific cells deviated in vitro towards IL-4 production ameliorates ongoing experimental allergic neuritis," *Clin. Exp. Immunol* 123:112-118 (2001).Karandikar et al. "Tissue-Specific Up-Regulation of B7-1 Expression and Function During the Course of Murine Relapsing Experimental Autoimmune Encephalomyelitis," *The Journal of Immunology* 161:192-199 (1998).Saoudi et al. "TH2 activated cells prevent experimental autoimmune uveoretinitis, a TH1-dependant autoimmune disease," *Eur. J. Immunol.* 23:3096-3103 (1993).Weintraub et al. "Up-Regulation and the Costimulatory Molecules B7-1 and B7-2 on Peripheral Lymphocytes in Autoimmune B6/gld Mice," *The Journal of Immunology* 159:4117-4126 (1997).Yu et al. "Expression of GAD65 and Islet Cell Antibody (ICA512) Autoantibodies Among Cytoplasmic ICA+ Relatives is Associated with Eligibility for the Diabetes Prevention Trial-Type 1," *Diabetes* 50:1735-1740 (2001).Arreaza et al., "Interleukin-4 Potential Immunoregulatory Agent in Therapy of Insulin-Dependent Diabetes Mellitus," *Clin. Immunother.* (4):251-260 (Oct. 1996).Bendelac et al., "Syngeneic Transfer of Autoimmune Diabetes from Diabetic Nod Mice to Healthy Neonates," *J. Exp. Med.* (166):823-832 (Oct. 1987).Berman et al., "Decreased IL-4 Production in New Onset Type I Insulin-Dependent Diabetes Mellitus<sup>1</sup>," *J. Immunol.* (157):4691-4696 (1996).Bluestone, J.A., "New Perspectives of CD28-B7-Mediated T Cell Costimulation," *Immunity* (2):555-559 (Jun. 1995).Cameron M.J. et al.: "Cytokline-and costimulation-mediated therapy of IDDM" *Critical Reviews In Immunology* 17(5-6):537-544 (1997).Christianson et al., "Adoptive Transfer of Diabetes Into Immunodeficient NOD-scid/scid Mice," *Diabetes* (42):44-55 (Jan. 1993).Corry et al., "Differential Effects of Blockade of CD28-B7 on the Development of Th1 or Th2 Effector Cells in Experimental Leishmaniasis<sup>1</sup>," *J. Immunol.* (153):4142-4148 (1994).Freeman et al., "B7-1 and B7-2 Do Not Deliver Identical Costimulatory Signals, Since B7-2 but Not B7-1 Preferentially Costimulates the Initial Production of IL-4," *Immunity* (2):523-532 (May 1995).Freeman et al., "Murine B7-2, an Alternative CTLA4 Counter-Receptor that Costimulates T Cell Proliferation and Interleukin 2 Production," *J. Exp. Med.* (178):2185-2192 (Dec. 1993).

(List continued on next page.)

**Primary Examiner**—Phillip Gambel**Assistant Examiner**—Ilia Ouspenski**(74) Attorney, Agent, or Firm**—Townsend and Townsend and Crew LLP**(57) ABSTRACT**

Methods are provided for preventing the development of autoimmune diseases in susceptible subjects and for prolonging acceptance of tissue transplants by administration of an agonist of the T cell CD28 co-stimulatory receptor.